

## IN THE SPECIFICATION

Please replace paragraph [0002] with the following amended paragraph:

[0002]        The ~~invention~~ field relates to an insulation for an aircraft such as a fire insulation or protection. In particular, the ~~present-invention~~ field relates to an insulation package arrangement for insulating the interior of an aircraft fuselage.

Please replace paragraph [0003] with the following amended paragraph:

[0003]        Conventional insulation systems are known which, as shown in the enclosed Fig. 1, essentially comprise a core- and insulation material which is embedded in an insulation package and comprise an enclosure. The core- and insulation material may comprise products of the fiber industry, of which products in particular glass fiber materials (glass wool) are in widespread use. This material meets to a very large extent the requirements regarding thermal and acoustic insulation. In order to install (attach) the relatively amorphous semi-finished products to (or near) the vehicles structure, the insulation package (which is made from these semi-finished products) is enclosed in an enclosing foil. The ends of this enclosing foil may be reinforced so that adequate attachment of the (thus completed) insulation package to the structural surfaces of the vehicle ~~can~~ may take place by means of attachment elements.

Please replace paragraph [0004] with the following amended paragraph:

[0004] In aircraft engineering, attachment of insulation packages takes place on the ribs of the fuselage structure, wherein attachment elements are used which usually comprise a plastic material, for example, a polyamide.

Please replace paragraph [0005] with the following amended paragraph:

[0005] Fig. 2, shows a so-called post-crash fire scenario of an aircraft where burning kerosene can cause the aluminum cell of the aircraft structure and also the fuselage insulation (interior insulation) of the aircraft to burn through. ~~Trough~~ Through such holes, a flashback of the fire into the passenger cabin may occur. Thus, there is always a desire to provide for an even better fire insulation or protection for aircraft fuselages which may withstand such fire situations for an extended period of time.

Please replace paragraph [0006] with the following amended paragraph:

[0006] Furthermore, conventional insulation attachment elements are made from non-metal materials (plastics), which in the case of a fire may melt. Thus, there is always a desire to extend a period of time the attachment elements resist a fire and hold the insulation in place to prevent falling down of the (burning) insulation (insulation packages), which may lead to the presence of uncontrollable obstacles in the vehicle's interior.

Please replace paragraph [0012] with the following amended paragraph:

[0012] It is believed that an improved insulation package arrangement for an aircraft may be provided, which arrangement may be used for interior insulation, to such an extent that with it the flames of a seat of fire acting from outside the aircraft environment are ~~essentially~~ substantially prevented from entering the cabin space of an aircraft (that has made an emergency landing) or a fire withstanding time may be extended. The design of the insulation package and its attachment to the fuselage structure is believed to be suitable for implementing an increase in the fire protection safety of separated interior regions that are situated near a structural outer skin.

Please replace paragraph [0025] with the following amended paragraph:

[0025] For greater ease of understanding Fig. 1, which shows an insulation, it should be mentioned by way of an introduction that the structural unit of the aircraft fuselage not only comprises stringers 31 with which all the panels of an outer skin 33 of an aircraft fuselage structure are stiffened, but also comprises several ribs 32 which are arranged substantially perpendicular ~~perpendicularly~~ to the longitudinal axis 9 of the aircraft (approximately) at a distance c, and are attached to the stringer 31. Integrated in these ribs 32, on the unattached end is a (so-called) rib carrier 40 which continues on substantially parallel to the longitudinal axis 9 of the aircraft, wherein the (unattached free) end of the rib carrier 40 (according to this embodiment) is angled substantially perpendicular ~~perpendicularly~~ to the longitudinal axis 9 of the aircraft.

Please replace paragraph [0026] with the following amended paragraph:

**[0026]** Fig. 1 shows the position of an insulation package 3 (with general reference characters) (of the fuselage insulation) on the (near) outer skin 33 of the aircraft. In each instance, this insulation package 3 comprises a so-called field insulation package 17 and a so-called rib insulation package 16, which in the traditional way are both installed separately and are attached near the outer skin 33 or are attached so as to rest against a stringer support surface 31a of the stringer 31 (i.e., in a defined structural zone of the aircraft fuselage structure). Fig. 1 thus shows that a field insulation package 17 has been placed between the (two) ribs 32, spaced apart at a distance c, near (resting against) an inner area of a panel of the outer skin of the outer skin 33. Furthermore, a rib insulation package 16 has been placed onto the rib carrier 40, wherein said rib insulation package 16 is guided so as to be resting on both sides against the longitudinal sides 41 of the ribs. When viewed from the side as shown in Fig. 3, the rib insulation package 16 is guided not only on the so-called front longitudinal side 41 (the right-hand side) of the rib but also on the so-called rear longitudinal side 41 (the left-hand side) of the rib.

Please replace paragraph [0028] with the following amended paragraph:

**[0028]** The insulation arrangement according to an exemplary embodiment of the present invention may be arranged in spaces, e.g. in spaces to be partitioned off, which

spaces include a space enclosed by the outer skin 33 and by interior cladding of the aircraft cabin, said space being arranged substantially parallel at a defined distance (transversely to the longitudinal axis of the fuselage 9).

Please replace paragraph [0029] with the following amended paragraph:

[0029] With reference to Fig. 2, “a fire situation” involving an aircraft after an emergency landing will be described. If, in the context of such a (hypothetical) fire situation, referred to as a “post-crash fire scenario“ 7, one considers that an emergency situation for passengers and the aircrew will arise in the fuselage, i.e. in the interior of the cabin in the case of an aircraft structure 8 (damaged from the outside) (with a defective outer skin 33) following external mechanical action and a resulting fire acting on the shown aircraft regions due to spillage and ignition of kerosene, then it may be understood that a period of time during which the structure, the fuselage and also the paneling withstands the fire should be extended and as long as possible to allow [[e.g.]] a coordinated evacuation, for example.

Please replace paragraph [0034] with the following amended paragraph:

[0034] In contrast to the field- and rib insulation packages 17, 18 where only relatively amorphous semi-finished products, such as ~~for example~~, glass fiber materials, are used which meet the requirements of thermal and acoustic insulation, which insulation is enclosed by a combustible plastic foil, the design of individually proposed fuselage insulation

packages 19 to 22 takes into account a burn-through proof insulation of a larger cross section, or a burn-through-proof barrier layer of a smaller cross section, or both burn-through-proof insulation means, which are thus arranged either individually (each on its own) or together in combination within the respective fuselage insulation package 19 to 22.

Please replace paragraph [0036] with the following amended paragraph:

**[0036]** As an alternative, it is imaginable for the burn-through-proof insulation or the barrier layer to be guided outside of and adjacent to the circumference of the foil 11 of the individual fuselage insulation package 19 to 22, which insulation or barrier layer is attached to a support area 31a of the stringer 31 and is attached to the circumference of the foil 11 by means of adhesive connections.

Please replace paragraph [0047] with the following amended paragraph:

**[0047]** The package region arranged downstream of the respective fuselage insulation package 19 to 22 which (as shown in Fig. 1) rests against the rib carrier 40, and laterally resting against the angled-off end of the rib carrier 40, on the end of the foil end continues to a first flat insulation end section 12a of the (for example first) fuselage insulation package 20, which insulation end section 12a on the other side (lateral left) rests against a second longitudinal side 41b of the first rib 32a, which longitudinal side 41b is positioned on the front. Said first flat end section of insulation 12a comprises a so-called hole-like recess.

Since it is intended for a second flat insulation end section 12b – which is continued on the end of the foil at the end of the adjacent (serially arranged) second fuselage insulation package 21 – to be arranged on or below the support surface of the first insulation section 12a, that insulation end section 12b also comprises a so-called hole-like recess. If the hole-like leadthrough, the through hole and those two hole-like recesses are arranged so as to be congruent, an insulation pin, which is burn-through-proof, of the first attachment element ~~can~~ may be fed through the holes of that defined package region of the first fuselage insulation package 20, through the through hole of the rib attachment region 15 and through the attachment region of the two flat insulation sections 12a, 12b.

Please replace paragraph [0048] with the following amended paragraph:

**[0048]** According to Figures 5, 5a, the design of the insulation pin is implemented with a cylindrical core element 25 and a cylinder-like plastic-like casing 28, wherein the core element 25 near the end of the pin 27 in each case comprises a flange-like elevation 26. The core element 25, whose shape is shown in the longitudinal section view according to Fig. 5a, is embedded in that plastic-like casing 28. Approximately in the middle of the casing 28, a (type of ring-) flange 29 exits, from which, starting at the cylindrical circumference of the casing 28 and parallel to a pin axis 43 of the first attachment element 4 (of the insulation pin) distributed along its length – several pine-tree-shaped elevations 30 are positioned, which are arranged so as to be spaced apart from each other at a distance a. The pine-tree-shaped elevations 30 are comparable to a type of a stepped gradation 44 that is

conical, wherein the gradation 44 starts at the circumference of the casing 28, wherein its tapering off conical form is realized by a conical tapering off of the circumference of the casing. The end region of the casing 28 is dome-shaped, in the form of a recess. The external shape of said end region is similar to that of a paraboloid, comparable to the shape of a parabolic rotation body whose longitudinal section has been realized with a parabolic shape, wherein the branch end of the parabola is continued by a stepped gradation 44 drawn inward vertically in relation to the pin axis 43. The core element 25 is made from metal, namely a steel, preferably stainless steel. In contrast to this, the casing is made from a plastic of poor thermal conductivity.

Please replace paragraph [0050] with the following amended paragraph:

[0050]        The truncated-cone body could be designed such that the cover area 46 comprises a first insulation disc, where a hole has been made in the middle of the disc. The diameter of this hole should be smaller than the external diameter of the end region 42, in the shape of a paraboloid, of the dome-shaped casing 28, so that the holed wall of this insulation disc made from a plastic material ~~can~~ may be guided with a tight fit over the branch end of the parabola of the parabolic end region 42 of the casing 28. Without pre-empting the further explanations, it is intended that the first insulation disc, made from a plastic material, due to the admitted flexibility of the plastic material ~~[[can]]~~ may be moved over the dome-shaped casing 28 of the first attachment element 4 of the insulation pin (with a tight fit), whereas in the opposite direction of movement, this insulation disc ~~[[can]]~~ may only be guided over the dome-



shaped casing 28 with considerable mechanical effort. Since this embodiment will also take into account a second insulation disc made of a plastic material, which disc forms the base area 46 of the truncated-cone body, in which in the middle of the disc there is a hole, the diameter of this hole is the same as, or slightly larger than, the external diameter of ~~[[said]]~~ the dome-shaped casing 28 of the first attachment element 4 of the insulation pin, so that ~~[[said]]~~ the second insulation disc can be fitted over that dome-shaped casing 28 of the insulation pin. Returning to the illustrations in Figures 3 and 4, it thus becomes clear that in the final analysis a second attachment element 13, designed in such a way, of the flat insulation end sections 12, 12a, 12b to be fixed and attached to the longitudinal sides 41, 41a, 41b of the ribs 32, 32a, 32b, 32c is likely to be suitable.

Please replace paragraph [0054] with the following amended paragraph:

**[0054]** For the sake of completeness, it should be mentioned that the insulation discs and the insulation rings from which the second attachment element 13 is constructed, are arranged so as to be substantially parallel in relation to each other, wherein the element which forms the base area 46, in other words the second insulation ring 49, is arranged at a ring distance b (height distance of the rings) from the element which forms the cover area 47, in other words the first insulation ring 48. The circumference of these elements is enclosed by that insulation jacket 50 which is attached to the outside circumference of the rings.

Please replace paragraph [0055] with the following amended paragraph:

[0055] It should be added that the second attachment element 13 ~~[[can]]~~ may also be compared to the shape of a cage body in the form of a so-called truncated-cone body, because several insulation braces 51, designed so as to be burn-through proof, ~~can~~ may be joined on the margin of the base area and cover area 46, 47 of ~~[[said]]~~ the second attachment element 13. In this arrangement, the insulation braces 51 which are distributed around the circumference are attached on the circumference of the second insulation ring 49 which has the larger circumference and to the first insulation ring 48, in which braces 51 support the two rings in a cage-like manner. As an alternative it would be imaginable that these insulation braces 51 are supported by a second insulation disc (which forms the base area 46) and by a first insulation disc (which forms the cover area 47), to which the ends of the insulation braces 51 are attached by the rim.